

REMARKS

I. STATUS OF THE CLAIMS

After entry of this amendment, claims 41, 43, 44, 48, 51, 52, 56, 75-77, 79-82, and 86-102 are pending in this application and are presented for examination. Claims 1-40, 42, 45-47, 49, 50, 53-55, 57-74, 78, and 83-85 have been canceled without prejudice to future prosecution. Claims 41, 48, 77, and 86 have been amended. Claims 87-102 are newly added.

Claim 41 has been amended to pursue nucleic acid molecules consisting of SEQ ID NO:3, SEQ ID NO:5, or the complementary sequences thereof. Claims 48 and 86 have been amended to incorporate the features of claim 41. The amendments to claim 77 and newly added claims 87-102 find support, for example, in Figures 6 and 8; from page 8, line 15 to page 9, line 17; from page 11, line 19 to page 12, line 7; from page 16, line 31 to page 18, line 15; on page 21, lines 28-30; in Examples 3 and 4 on pages 28-31; in Tables 2 and 3 on pages 40-43; and in Table 7 on page 47 of the specification as filed.

As such, no new matter has been introduced. Reconsideration is respectfully requested.

II. EXAMINER INTERVIEW

Applicants and their undersigned representative wish to thank the Examiner for the telephonic interview conducted on October 6, 2010, in which the teachings of Birren *et al.* (GenBank Accession No. AC016516; April 1, 2000), proposed amendments to claims 77 and 84-85, and a proposed new independent method claim were discussed.

During the interview, the Examiner agreed that Birren *et al.* neither discloses SEQ ID NO:3 nor relates to the detection of hypolactasia. In particular, the Examiner agreed that this reference does not teach or suggest a nucleic acid sequence which includes position 324 of SEQ ID NO:3 (*i.e.*, a wild-type "T" allele at that position in the sequence). The Examiner also agreed to consider composition of matter and method claims directed to nucleic acid molecules such as probes and primers which include position 324 of SEQ ID NO:3, alone and together with nucleic acid molecules such as probes and primers which include position 324 of SEQ ID NO:5. The

Examiner further indicated that upon completing a new search of the claims, Applicants would be contacted to discuss allowable subject matter.

III. REJECTION UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

Claims 84 and 85 were rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. Applicants have canceled these claims without prejudice to future prosecution, thereby rendering the present rejection moot. Thus, Applicants respectfully request that the Examiner withdraw this rejection.

IV. FIRST REJECTION UNDER 35 U.S.C. § 103(a)

Claims 41, 43-44, 48, 51-52, 56, 77 and 79-83 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Birren *et al.* in view of Gray *et al.* (U.S. Patent No. 5,851,769). To the extent that the rejection is applicable to the amended set of claims, Applicants respectfully traverse the rejection.

In an earnest effort to expedite prosecution but without acquiescing on the merits of the rejection, Applicants have amended claim 41 to recite a nucleic acid molecule consisting of SEQ ID NO:3, SEQ ID NO:5, or the complementary sequence thereof. Claim 77 has been amended to recite a nucleic acid molecule comprising a sequence of at least 14 consecutive nucleotides of SEQ ID NO:3, which includes position 324 of SEQ ID NO:3, or a sequence of at least 14 consecutive nucleotides of the complementary sequence to SEQ ID NO:3, which includes position 324 of the complementary sequence. In addition, Applicants respectfully point out to the Examiner that the newly added independent claims include the features of the nucleic acid molecule set forth in claim 77.

As noted above, the Examiner agreed during the telephonic interview that Birren *et al.* does not teach or suggest SEQ ID NO:3 or a nucleic acid sequence which includes position 324 of SEQ ID NO:3 (*i.e.*, a wild-type "T" allele at that position in the sequence). The Examiner has also acknowledged in the Office Action at page 14 that the prior art does not teach or suggest a nucleic acid molecule consisting of SEQ ID NO:5. In addition, Applicants assert that Gray *et al.* does not teach or suggest the specific nucleic acid molecules as presently claimed nor their

use in the presently claimed diagnostic methods for detecting hypolactasia. As such, Applicants submit that the disclosure of Gray *et al.* fails to remedy the deficiencies of Birren *et al.*

For the foregoing reasons, Applicants assert that there is simply no rational underpinning to combine the cited references to support a legal conclusion of obviousness. Accordingly, Applicants respectfully request that the Examiner withdraw the present rejection under 35 U.S.C. § 103(a).

V. SECOND REJECTION UNDER 35 U.S.C. § 103(a)

Claims 75 and 86 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Birren *et al.* in view of Gray *et al.*, as applied to claims 41, 43-44, 48, 51-52, 56, 77 and 79-83, and further in view of Ahern. To the extent that the rejection is applicable to the amended set of claims, Applicants respectfully traverse the rejection.

Both Birren *et al.* and Gray *et al.* have been discussed above. Although Ahern apparently teaches reagents in kit form, there is simply no teaching or suggestion of the specific nucleic acid molecules as presently claimed nor their use in the presently claimed diagnostic methods for detecting hypolactasia. As such, Applicants submit that the combination of these references does not teach all the elements of the claims. Accordingly, Applicants respectfully request that the Examiner withdraw the present rejection under 35 U.S.C. § 103(a).

VI. THIRD REJECTION UNDER 35 U.S.C. § 103(a)

Claims 84 and 85 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Birren *et al.* in view of Gray *et al.*, as applied to claims 41, 43-44, 48, 51-52, 56, 77 and 79-83, and further in view of O'Neill *et al.*

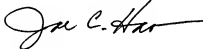
As noted above, Applicants have canceled these claims without prejudice to future prosecution, thereby rendering the present rejection moot. Thus, Applicants respectfully request that the Examiner withdraw this rejection under 35 U.S.C. § 103(a).

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 925-472-5000.

Respectfully submitted,



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